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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,075	04/12/2005	Hiroko Kuno	050136	2558

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EXAMINER	
JACKSON, MONIQUE R	
ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
11/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/531,075	KUNO, HIROKO	
	Examiner	Art Unit	
	Monique R. Jackson	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed 9/6/07 has been entered. Claims 3 and 4 have been canceled. Claims 1, 2, and 5 are pending in the application. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

2. Claims 1, 2, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Takeda et al (USPN 6,319,613) for the reasons recited in the prior office action and restated below, wherein the Examiner further notes that the limitation "kneaded" is a process limitation that does not materially or structurally differentiate the instantly claimed final product from the final product taught by Takeda et al.

Takeda et al teach a solution for forming a film having a high transmittance and a low reflectivity for visible light and a low transmittance for near infrared radiation comprising fine particles of a hexaboride of Y, La, Ce, Pr, Nd, Sm, Eu, Gd, Th, Dy, Ho, Er, Tm, Yb, Lu, Sr or Ca, and fine particles of ITO or ATO in a weight ratio of from 0.1:99.9 to 90:10, in a particle size up to 200 nm, and further comprising a binder such as a thermoplastic resin or curable resins such as epoxy, urethane-, **polyester-**, or polyether- acrylate resins; wherein the coating can be applied to at least one side of a resin film as a base to form a thin, uniform film for cutting off solar heat radiation (Abstract; Col. 3-5.) Takeda et al also **provide examples having a particle content that would fall within the instantly claimed concentration ranges** and specifically provide transmittance values that are within the claimed ranges of instant claim 2. Takeda et al further teach that that visible light transmittance and the solar radiation transmittance are controlled by the amount and ratio of fine particles added to the coating (Examples.)

Claim Rejections - 35 USC § 103

3. Claims 1, 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher (USPN 6,620,872) wherein the instantly claimed polymer resins would have been obvious to one having ordinary skill in the art at the time of the invention based on the teachings of Fisher given that they are known functionally equivalent polymer resins to the PVB and PVA taught by Fisher, specificially PVOH.

Fisher teaches an infrared absorbing polyvinyl butyral composition comprising a polyvinyl butyral (PVB) resin, which is formed by the reaction of polyvinylalcohol and butyraldehyde and typically comprises about 10-25wt% of PVOH in the final PVB; and an infrared absorbing effective amount of fine particles of (i) lanthanum hexaboride present in an amount between about 0.005 and about 0.1 percent by weight of the composition, or (ii) a mixture of lanthanum hexaboride present in an amount between about 0.001 and about 0.1 percent by weight of the composition and at least one of indium tin oxide and antimony tin oxide, said indium tin oxide and/or antimony tin oxide present in said mixture in an amount of about 0.05 to about 2.0 percent by weight of the composition dispersed in said PVB (Abstract; Col. 3; Claim 1.) Fisher teaches that the composition may be utilized to produce a visually transparent sheet of PVB or utilized as an IR absorbing interlayer sandwiched between two sheets of glass (Abstract.) Fisher also teaches that while PVB is the preferred resin used in the present invention, other polymers which may be used to form interlayer sheets of glass laminates could be substituted for PVB, and specifically refers to the known use of PVB and ethylene-vinyl acetate as interlayer materials in the background section (Col. 3, lines 38-42; Col. 1, lines 48-63.) In addition, Fisher provides examples having a composition that reads upon the claimed

invention including visual transmission and solar transmission values that read upon the claimed ranges in instant claim 2 (Examples.)

4. Claims 1, 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo (USPN 5,830,568) wherein the instantly claimed polymer resins would have been obvious to one having ordinary skill in the art at the time of the invention based on the teachings of Kondo given that they are known functionally equivalent polymer resins to the PVB and PVA taught by Kondo, specificially PVOH. Kondo teaches a laminated glass comprising first and second transparent glass plates and an interlayer film interposed therebetween, wherein the interlayer film comprising functional ultra-fine particles, preferably antimony tin oxide (ATO) or indium tin oxide (ITO) particles, dispersed therein to provide various additional functions such as heat insulation and ultraviolet ray absorption (Abstract; Col. 3, line 13-Col. 4, line 2.) Kondo teaches that the interlayer film preferably comprises polyvinyl butyral or an ethylene-vinylacetate copolymer and ultra-fine particles in an amount up to 10.0 wt % based on the total weight of said interlayer film (*reads upon the claimed filler content*) to thereby maintain the solar radiation transmittance within a range of up to 65% while the scattering and reflection of the visible light rays is suppressed (Col. 3, lines 19-65.) Kondo specifically teaches that as an automotive glass plate, it is preferable that the laminated glass has a visible light transmittance of at least 68 or 70%, and a solar radiation transmittance of up to 60% (*hence within the claimed ranges of instant Claim 2 and a visible light transmittance that is larger by 10% or more*; Col. 6, lines 12-17.)

Response to Arguments

5. Applicant's arguments filed 9/6/07 have been fully considered but they are not persuasive. With respect to Takeda, the Applicant argues that Takeda et al do not teach that the particles are kneaded in the resin, that the resin is as instantly claimed, and that the particle content is as claimed. However, the Examiner notes that the limitation "kneaded" is a process limitation that does not materially or structurally differentiate the instantly claimed final product from the final product taught by Takeda et al given that the particles would be dispersed in the resin whether by kneading as instantly claimed or by dispersing them in a solution with the resin as taught by Takeda et al. The Examiner also notes that Takeda et al specifically teach polyester resins which are recited in the instant claims and do disclose particle concentrations that fall within the claimed range and hence read upon the instant invention.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 10:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Monique R. Jackson
Primary Examiner
Technology Center 1700
November 26, 2007